

Application No. 10/072,773
Filed: February 8, 2002
TC Art Unit: 2623
Confirmation No.: 2015

REMARKS

In response to an Office Action mailed on September 9, 2005, Applicant respectfully requests that the above-listed Amendments be entered and the Application be reconsidered. With entry of the above-listed Amendments, claims 1, 3, 6-11 and 14 are amended; claims 12 and 13 are canceled; and claim 22 is new.

The Examiner rejected claims 1, 3, 6-11, 14, 15, 17 and 18 under 35 U.S.C. §103(a) as being obvious over US Pat. No. 6,603,878 to Takemoto ("Takemoto") and US Pat. No. 6,856,704 to Gallagher, *et al.* ("Gallagher"). In addition, the Examiner rejected claims 12 and 13 under 35 U.S.C. §103(a) as being obvious over Takemoto and US Pat. No. 5,270,530 to Godlewski, *et al.* ("Godlewski").

The present Application discloses and claims a method for globally improving an image, such as a photographic image, by local image sharpening. Claim 13 recites, *inter alia*, "applying an image detail reduction process to the photographic image to be sharpened, such that coarse image data resulting therefrom represents a coarse image with less detail than the photographic image to be sharpened." (Emphasis added.)

The examiner cited Godlewski's disclosure (col. 10, lines 14-22) of unsharp masking, particularly Godlewski's disclosure of "blurring," as anticipating the recited "image detail reduction process." Godlewski discloses blurring a copy of an image through convolution, a mathematical process that multiplies the image by a kernel. The size of the kernel determines a number of weight factors and, therefore, an extent to which the image is blurred. (*Id.*)

Unsharp masking produces a blurred image that contains the same number of image data points as in the original image. In contrast, the Application discloses producing a "course image," such as by a downsampling process. (See, for example, Application page 5, line 25 to page 6, line 24 and Fig. 2.) A data reduction process necessarily reduces the number of image data points. Thus, the course image contains fewer image data points than the original image. Reducing the number of image data points provides a computational advantage over the prior art, because fewer image data points need to be processed.

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Independent claim 1 (from which claims 12 and 13 depend) has been amended to recite, "applying a downsampling process to the photographic image to be sharpened, such that coarse image data resulting therefrom represents a coarse image with less detail than the photographic image to be sharpened, wherein the coarse image includes a multitude of coarse image elements." (Emphasis added.) No art of record, either alone or in combination, discloses or suggests downsampling an image to produce a course image, as recited in amended claim 1. Claim 1 is, therefore, believed to be allowable.

Claim 14 has been amended to recite a downsampling unit and a correction mask determining unit. No art of record, either alone or in combination, discloses or suggest a device for focusing a photographic image that includes a downsampling unit and a correction mask determining unit, as recited in claim 14. Claim 14 is, therefore, believed to be allowable.

Claims 12 and 13 have been canceled.

Claims 3 and 6-11 depend directly or indirectly from claim 1. Claims 15, 17 and 18 depend directly or indirectly from claim 14. These dependent claims are, therefore, believed to be allowable, for at least the reasons given above.

New claim 22 recites the same downsampling process as claim 1. Claim 22 is, therefore, believed to be allowable, for at least the reasons given above. In addition, claim 22 recites, "wherein sharpness of at least some image elements in regions of the coarse image exhibiting a high contrast is decreased." No art of record, either alone or in combination, discloses or suggests decreasing sharpness of image elements in regions that exhibit a high contrast, as recited in claim 22. For at least this reason, claim 22 is believed to be allowable.

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For all the foregoing reasons, it is respectfully submitted that the present Application is in a condition for allowance, and such action is earnestly solicited. The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present Application.

Respectfully submitted,

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